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THE ZOOLOGIST:

A

POPULAR MONTHLY MAGAZINE

OF

NATURAL HISTORY

AND

JOURNAL FOR RECORDING FACTS & ANECDOTES

RELATING TO

QUADRUPEDS, BIRDS, REPTILES, FISHES, ANNELIDES,
INSECTS, WORMS, ZOOPHYTES, &c.

THEIR HABITS, FOOD, RETREATS, OCCASIONAL APPEARANCE,
MIGRATIONS, NESTS AND YOUNG.

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PROCEEDINGS OF SOCIETIES.

ENTOMOLOGICAL SOCIETY.

Anniversary Meeting, January 23, 1854.— **EDWARD NEWMAN**, Esq., President, in the chair.

The Secretary read the Bye Law pertaining to the Annual General Meeting, and the Report of the Library and Cabinet Committee, made to and and adopted by the Council. Read also an abstract of the Treasurer's Accounts, from which it appeared that the finances of the Society had quite recovered from their depressed state at the end of 1852, and that the income and expenditure were now about equal.

The President having appointed two Scrutineers, the ballot took place; when it appeared that Messrs. W. S. Dallas, Edward Sheppard, F. Smith, and H. T. Stainton were elected into the Council, in the room of Messrs. J. Curtis, E. W. Janson, W. Spence, and J. O. Westwood; and that the following gentlemen were re-elected to the respective offices for the ensuing year: — Edward Newman, Esq., President; S. Stevens, Esq., Treasurer; and J. W. Douglas and W. Wing, Secretaries.

The President then delivered the following Address: for this, and his services to the Society during the year, the Meeting passed a vote of thanks, and he was requested to allow his Address to be printed.

Votes of thanks were also passed to the Treasurer, Secretaries, and retiring Members of the Council.

THE PRESIDENT'S ADDRESS.

GENTLEMEN,

In returning into your hands the important office with which you have intrusted me, I should neither be performing my duty, nor obeying the dictates of my own inclination, were I not to express to you my sincere gratitude for the kindness with which you have invariably received me. I came amongst you a comparative stranger to all, an entire stranger to the majority: not only, as I conceived, by no claim or merit of my own, but quite in opposition to my own often-expressed, and still unaltered judgment, that the office-bearers of every Society should be selected from among its most active and useful members. Notwithstanding these sentiments I came forward at your call, have been received by you with the utmost kindness and indulgence, and shall ever remember with pleasure the period during which I have enjoyed the honour of presiding over you.

The duties of President, and indeed the general business of the Society, are so new to me, that I cannot help fearing that some of my

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observations thereon may appear unimportant, or out of place; but I still trust to your indulgence, and, as every fresh actor is found to give some new reading to a part, however variously it has been played before, so it is probable that each successive President may be struck by some point or other which his predecessors had either designedly or unintentionally overlooked. You will, I am sure, bear with me while I briefly allude to one or two subjects which have particularly attracted my attention.

The first of these is the peculiarly, although not exclusively, *British* character of our proceedings. Our science is truly cosmopolitan: but it is the honour and glory of a naturalist to make himself thoroughly acquainted with the productions of his own country. How immutably true, and how profoundly patriotic, is the Linnean axiom, "Turpe est in patriâ vivere et patriam ignorare." Let us begin at home: let us make ourselves thoroughly acquainted with the Natural History of Great Britain: and, that end achieved, we may enlarge the circle of inquiry by degrees. Let us not grasp too much at the outset. The same observation applies generally as well as geographically; by restricting our research to a class, an order, or a family, we are enabled to give it more intense attention. What an intimate knowledge have Zeller, Stainton, our worthy Secretary, and others thus acquired of the Micro-Lepidoptera; Mr. Dawson of the British Geodephaga; Mr. Doubleday and Mr. Edwin Shepherd of British Lepidoptera; Mr. Walton of British Curculionidæ; Schönherr of Curculionidæ generally; Chevrolat of Cerambycidæ; Pictet of Phryganidæ; Gravenhorst of Ichneumonidæ; Mr. Smith of Aculeate Hymenoptera, and especially of our British bees; Meigen and Walker of Diptera! I might cite fifty examples equally striking, and all equally establishing the fact that the more restricted the range of inquiry, the more certain, precise, and durable will be its results. The debilitating effect of desultory study is obvious to every psychologist. It is with mind as with matter, the more extensive the surface it covers the more attenuated will be the covering. Study, in order to be productive of useful results, must be concentrated and systematised: it then shines brightly forth on the path of the future student.

The communications which have struck me as possessing the most absorbing interest are such as relate to insects which exert an important influence over man, whether for his benefit or injury: such, for instance, as that by Mr Hanbury, on the wax insects of China; that by Mr. Oswell, on the cattle fly of Africa; and that by Captain Cox, on Scolytus: in these instances man is brought into absolute contact with the insect: in the first this contact is entirely beneficial; in the others entirely the reverse: and mankind would be infinitely indebted to the entomologist who should, by attentive observation, detect the means of increasing the benefit or of mitigating the injury. To the discussions which have resulted from these and other communications, I have always listened with the deepest interest and most profound attention; and I have been peculiarly gratified to observe the uniformly courteous manner in which they have been conducted. There is scarcely one scientific subject which we can all view in the same light, and the difference of opinion, which of necessity results from the different mental constitution of individuals, is in itself an important element in our search after that truth which is the kernel of the whole question, the reward we obtain for our labour in clearing away the tasteless and seemingly impenetrable husk with which we so often find it invested. Nevertheless, this difference should ever be urged, as it has been, with that courtesy and that respect for the feelings and the judgment of others, which dignifies alike the original opinion and the objection, and which evinces a love of truth overcoming a love of conquest. I could wish that a month's notice were given of any paper likely to excite such discussions: the most prosperous of all our Societies, the Royal Geographical, adopts this course; and I have actually read this day in the 'Morning Herald' an advertisement of the papers next to be discussed: by this expedient we should escape both objections and adhesions carelessly and hastily given, and out of our abundant printed "treasures, things new and old might be brought forth," and thus much additional information diffused among our members: it has several times struck me as somewhat inconsistent for any scientific body to discuss, as new, matters which have long since been carefully investigated by our predecessors. But these remarks do not, in any degree, apply to the mere introduction of papers: gladly would I see the greatest possible encouragement given to such introduction; and no one could object to being referred, with courtesy, to sources whence he might derive more perfect information.

On one subject I venture to express an opinion at variance with what appears a prescriptive practice. I repeatedly find in entomological works the indication of a desire to depreciate that particular branch of the science which some one else has taken, or is supposed to be taking up. Such terms as "species-man," "mere collector," "theorist," and many others, need but be quoted in explanation of my meaning. Now the sentiment implied by such expressions is unphilosophical; it is not in accordance with the catholicity of science; it implies that we are drawing a comparison between ourselves and others disadvantageous to those others, and it therefore has a direct tendency to foster, if not to create, feelings that ought not to exist. The Lepidopterist, the Dipterist, the Hymenopterist, or Coleopterist; the systematist or the utilitarian; the student of economy, or the collector; the man, in fact, who selects, of his free choice, his own particular, favourite objects of study, and yet who presumes to look down on another who has made a different choice, exhibits a want of that philosophical spirit which would assure him that all these work together harmoniously for the general good: all are equally striving after the *excelsior* of the poet: each is ascending, after his own fashion, the hill of science: and not only must he have perfect liberty to select his own path, but, if he be only industrious, he will establish an indubitable claim to the merit of strewing that path with flowers which any of us may gather. One man studies an insect solely with a view to increase its pecuniary benefit, or diminish its pecuniary injury to man; another observes the bee building her cells and storing her honey simply as a matter of amusement; a third watches the Ichneumon as she glides with shivering antennæ over the surface of a leaf until she find the larva on whose living flesh her young is destined to feed; a fourth, with greater perseverance and more determined zeal, elaborates the previously unknown history of a single individual from the ovum to the imago; a fifth, by the aid of microscope and scalpel, thoroughly masters the phenomena of intimate structure, tracing every system of organs in its wondrous permeation of the insect frame, and not resting here, carries the physical knowledge thus gained into the wider and still more interesting field of physiology; a sixth spends days and nights in the capture of insects simply induced by their rarity; a seventh consumes the midnight oil in describing the new or the beautiful or the curious; an eighth ponders over systematic classification; a ninth labours to complete a monographic history: all these are hastening to the same terminus; are all, in fact, on their way upwards. We have long since been told that members of the human body must work together in concert: that the head must not say to the hand "I have no need of thee," or the hand to the feet "I have no need of you:" so with our science; the monographer cannot say to the collector, I have no need of you: the very admission of such a thought is a stumbling-block in our own way, a bar to our own progress. I wish to be understood as applying this last observation especially and emphatically to the case of the actual collector; to the man who, in whatever station of life, devotes his time, by night and by day; at all seasons, in all weathers; at home and abroad, to the positive capture and preservation of those specimens which serve as the objects for all our observations: he is the real labourer in the field, and if we would keep the lamp of our science constantly burning, it is to him alone that we can look for fuel to feed its flame.

With regard to collectors at home, I will only say, without mentioning names, that many members of our own Society have displayed more zeal and greater industry than would have sufficed for the accumulation of almost boundless wealth, and yet the only object they have sought has been the acquisition of treasure for the mind; the only reward they have desired, the satisfaction of possessing that which is rare or beautiful. I must also allude, if but for a moment, to the advantages derived from the labours of still another class, those who, led by an instinctive taste to the pursuit of Entomology, have rendered that taste subservient to pecuniary gain; I allude to such men as Bouchard, Weaver, Standish, Harding, and Foxcroft: how often have these made truly valuable contributions to our stock of knowledge! And is it not this result alone that, in fairness, we can consider? Such men do great, permanent and continual good: they render our science an unquestionable service, and their motives are no more to be called in question than those of the artist or the author, who receives the just reward of his well-directed labours.

The results of collecting in Britain, during each successive year, appear almost incredible; and, when we recollect the indefatigable zeal of those who have preceded us, it seems surprising that so much should be done. Our English collectors seem to have found in Scotland comparatively a virgin soil as regards Entomology, and a soil, I may add, of incomparable richness.

From British collectors the transition is easy to others, who, inspired by a like taste, led on by an insatiable thirst for a more intimate acquaintance with Nature in her grandest phases and forms, have left their homes, have abandoned their prospects of worldly welfare, and have sought, in warmer climes, those glorious creatures which our chilly regions cannot produce. Your late Secretary, once my most beloved and intimate friend, was one of these; and it has always been my belief, that while assiduously collecting in the Floridas, he laid the foundation of that painful and lingering disease which finally deprived our science of one of its brightest ornaments. Another loss, truly to be lamented, but of a very different character, is that we have sustained, not in the death of an individual, but in the destruction of a zoological treasure; I allude, of course, to the collections made by our friend Mr. Wallace. That energetic traveller, led by the thirst I have already described to behold with his own eyes, and not through the too often distorting medium of books, the exuberant luxuriance of animal and vegetable life as developed by the rays of a vertical sun, devoted himself to the acquisition of, and actually acquired, a most intimate knowledge of the Natural History of the Valley of the Amazons; but alas, returning with his hard-earned treasures, the ill-fated 'Helen,' in which he was a passenger, took fire and went down in mid-ocean, leaving our friend to buffet with the waves. Providentially he escaped; he was picked up by the 'Jordeson' two hundred miles from land, and has lived to record in glowing words the history of his discoveries, his triumphs, his losses and his preservation. I cannot forbear to quote from his own pen the record of his feelings, when, no longer in jeopardy, he first realized the enormous loss he had sustained:—

"It was now, when the danger appeared past, that I began to feel fully the greatness of my loss. With what pleasure had I looked upon every rare and curious insect I had added to my collection! How many times, when almost overcome by the ague, had I crawled into the forest and been rewarded by some unknown and beautiful species! How many places, which no European foot but my own had trodden, would have been recalled to my memory by the rare birds and insects they had furnished to my collection! How many weary days and weeks had I passed, upheld only by the fond hope of bringing home many new and beautiful forms from those wild regions; every one of which would be endeared to me by the recollections they would call up; which should prove that I had not wasted the advantages I had enjoyed, and would give me occupation and amusement for many years to come! And now every thing was gone, and I had not one specimen to illustrate the unknown lands I had trod, or to call back the recollection of the wild scenes I had beheld! But such regrets were vain, and I tried to think as little as possible about what might have been, and to occupy myself with the state of things which actually existed."

Mr. Wallace is now on the eve of departure for the eastern instead of the western world; he sails in H. M. S. 'Frolic,' first to Sydney and then to the islands of the Eastern Archipelago. His face is familiar to us here; his writings are known to most of us, and some of them are on the point of publication in our 'Transactions.' I am sure that there is not one member of the Society but will wish him God speed!

Commensurate to the losses of Mr. Wallace have been the successes of Mr. Bates. Next to those of our own country, we have been accustomed to regard the insects of South America as those with which we were most intimately acquainted: the Morphos, nothwithstanding their magnificence, the Buprestes, the Cerambyces, the Scarabæi, notwithstanding their magnitude, were yet regarded with comparative indifference; they were familiar as household words, and because familiar, they were held in little estimation. But Mr. Bates has developed new features in the Entomology of that extraordinary continent; has sent us collections which astonish us equally by the countless profusion, the variety, the novelty, and the excessive loveliness of the species which they contain. And here I venture to make a passing allusion to finance; and I do this without any collusion with Mr. Bates or his agent, our respected Treasurer. I wish to remind you that collecting objects of Natural History in South America is most expensive; that the mere transit of the entomologist from place to place, accompanied only by so much apparatus, and so many assistants as are absolutely necessary in virgin forests, where railroads, coaches, or even stage wagons are unknown, is in itself a formidable item of expenditure, and requires almost incessant labour to procure sufficient specimens for their sale to supply a bare return of the cost. Gladly would I induce even those entomologists who are not forming collections of foreign insects to bear a part of the burden, and to contribute their mite towards promoting a cause which must tend so materially to the advance of our science. But Mr. Bates, like Mr. Wallace, has contributed observation as well as manual industry: he has given us valuable information on economy, and, in his zeal for the acquisition of specimens, has not failed to make the needful commentary on their habits and manners, their food and their metamorphoses.

I must also mention, and on behalf of this Society, with profound gratitude, the generosity of our corresponding member, Mr. Thomas Jones Stevens, of Bogotà: the exhibitions of this gentleman's beautiful insects have added interest to our meetings, and the presentation of them has greatly enriched our collection.

Neither must I forget Mr. Edgar Leopold Layard, now present at our meeting, who has lately made a very large collection of Cingalese Lepidoptera, including an unusual number of the smaller species, particularly Pyralina.

The records and the collections to which I have been alluding, principally British, but occasionally exotic, have combined with others of economical or descriptive character to enhance the interest and attraction of our meetings; and I rejoice to observe that these are invariably well attended. I know of no Society in which the average attendance is so large in proportion to the actual number of members; and this leads me to remark on our acquisitions and losses under this head.

Five years ago it was thought desirable to institute a second class of members, to whom the name of Subscribers was applied. During the past year we have elected ten members and nine subscribers, and I regret to say have lost no fewer than four members and ten subscribers, thus giving us a gain on the year of six members, and a loss of one subscriber. With a single exception, our losses have occurred from resignation or default of payment; the exception is Mr. William Lancey, whose death we have to lament.

Mr. William Lancey was elected on the 5th of April, 1852, and towards the close of the same month, having accepted an appointment in the engineer's staff of the East Indian Railway Company, left this country for the seat of his employment. In April last, in the vicinity of Calcutta, he was seized with fever, from which he was apparently slowly recovering, when, at the recommendation of his friends, he undertook a palanquin journey to Delhi, for the purpose of recruiting his strength; on his return, however, to Calcutta, the excitement attendant on the trip subsiding, he grew rapidly worse, and alarming symptoms presenting themselves, he was urged at once to return to England; to this he acceded, but unhappily the virulence of the fever had so prostrated him that he never rallied, and expired on the 5th of May, a few days subsequent to the departure of the vessel. During his short sojourn in India he prosecuted Entomology with enthusiasm, and his collections, now in his father's possession, afford ample evidence how industriously he devoted every spare moment and opportunity to its pursuit.

During the year we have lost two other entomologists, unconnected indeed with our Society, but whose names have long been familiar to the veriest tyro in our science; I allude, of course, to Friedrich Germar and the venerable Fischer de Waldheim.

Ernst Friedrich Germar was born on the 3rd of November, 1786; at twelve years of age he was sent to school at Meiningen, where one of our most illustrious entomologists, Clairville, was then residing: in 1807 he removed to Leipsig, and purchased the celebrated collection of Inspector Hübner, in Halle: this collection is repeatedly referred to in the works of Fabricius, and was valuable as containing many of the type-specimens of that great entomologist. He here also made the acquaintance of Kunze and Kaden. In 1810 he obtained the degree of Doctor of Philosophy in the University of Halle. In 1811 he made a tour in Dalmatia. In 1815 he married Wilhelmine Keferstein, with whom he lived happily, although childlessly, during the remainder of his life. In 1817 he was appointed extraordinary, and in 1824, ordinary Professor of Mineralogy in the University of Halle: he died in July 1853, aged 66 years and 8 months.

The works of Professor Germar are numerous and valuable, principally on the sciences of Entomology and Mineralogy, in both of which his reputation stood very high. The first series of Professor Germar's Magazine was commenced in 1813, and concluded in 1818; and the second was commenced in 1839, and continued under the same title till 1845, when it merged in the 'Linnæa Entomologica,' which is still in course of publication. Professor Germar's most important entomological works are as under:—

'Dissertatio sistens Bombycum Species secundum oris partium diversitatem in nova genera distributas,' 1810—1812.

'Magazin der Entomologie,' 1813—1822.

'Reise nach Dalmatien,' 1817.

'Insectorum Species novæ aut minus cognitæ descriptionibus illustratæ,' 1824; (contains descriptions of 891 species and 42 new genera of Coleoptera).

'Fauna Insectorum Europæ,' 1817—1847.

Professor Fischer de Waldheim, one of the few eminent entomologists that Russia has produced, was the last of that glorious band of naturalists whose fame was ushered in with the present century; the last, I should say, excepting that still more celebrated philosopher, the Baron von Humboldt: both these illustrious men have enjoyed, for at least half a century, a reputation which year after year has increased in lustre. Professor Fischer was born at Leipsig in 1770, and, after a most useful and energetic life, died at Moscow in 1853, at the advanced age of 82 years. In 1797 he accompanied Humboldt to Vienna, intending there to practise medicine, but devoted himself entirely to the study of Natural History, and more especially to that of the fishes of the Danube. He afterwards made a scientific journey through Germany and Switzerland, and then removed to Paris, where he aided Cuvier in his grand work, the 'Ossemens Fossiles.' In 1804 he accepted the situation of Professor and Director of the Museum at

Moscow, and continued to occupy it to his death. He founded the Imperial Society of Naturalists of Moscow, contributed largely to the Russian 'Annals of Natural History,' and occupied himself most indefatigably with all branches of his beloved science. His writings are numerous, and amongst them is a curious and valuable typographical history of the Bible. He was a member of more than eighty learned Societies, and was knight of the principal Russian orders: the honours he received in his own country afford a notable instance that Russia is not indifferent to scientific merit.

By our Treasurer's Report you have heard that our finances are in a very satisfactory state: it appears that, whereas, at the last audit, a deficiency of £28 was reported, it is now announced that our liabilities are no larger than our balance in hand, so that an improvement of nearly £30 has taken place in our fiscal condition. It must, however, be borne in mind, that £22 of our income in 1853 arises from a subscription raised for the express purpose of defraying previous expenses; and, much as we are indebted to those members who so generously assisted on that occasion, it is neither prudent nor just to look forward to such a source of revenue, but rather so to restrict our outlay that it shall always fall within our legitimate income. During the year we have issued three parts of the 'Transactions,' and since the close of the financial year a fourth, which was laid on your table at the last meeting: these are got up in the usual style of correctness, and are illustrated in a manner that must gratify our members and subscribers: with the value and importance of their contents you are already perfectly familiar.

By the Report of the Library and Cabinet Committee you have learned that both these departments are progressing favourably; and if there is a single cause for regret connected with either, it is that our really fine entomological library is not made more extensively useful by our members. Of our exotic insects I may, perhaps, be allowed to remark, that I consider it more desirable to obtain an arranged series of types than to attempt the formation of a complete collection of species: the cost of the former is trifling compared with its utility; the cost of the latter would be overwhelming to such a Society as ours, but devolves with propriety on a national institution. In this observation, I must not be understood as referring to the money-value of the specimens themselves, of which I know nothing, but simply to the items of cabinets, rooms, and labour in arrangement and preservation.

My predecessors have given a summary of entomological publications: I am glad to be relieved from this labour by the knowledge that the Society cannot judiciously incur the expense of its publication; and secondly, that the task is annually performed by my friend, Dr. Schaum, in the most complete and admirable manner in the 'Bericht,' which is presented by the author for the information of our members. The following works published in Britain may, nevertheless, be enumerated: —

'Insecta Britannica,' Vol. ii. 'Diptera;' by Mr. Walker.

'Exotic Butterflies;' by W. C. Hewitson, Parts v.—viii.

The following Catalogues of Insects have also been printed during the year, by order of the Trustees of the British Museum.

'Catalogue of Longicorn Coleoptera,' Part i.; by Mr. White.

'Catalogue of Hymenoptera (Andrenidæ);' by Mr. Smith.

'Catalogue of Homoptera,' Part iv.; by Mr. Walker.

'Catalogue of Neuroptera,' Part iv.; by Mr. Walker.

'Nomenclature of British Hymenoptera;' by Mr. Smith.

'Nomenclature of British Neuroptera;' by Mr. White.

'Nomenlacture of British Diptera;' by Mr. White.

Four important works are announced as in a state of forwardness, and three of them are advertised as in the press. I have no doubt that all of them, when complete, will advance the study of Entomology, and will reflect honour on the various authors.

1. 'Insecta Maderensia;' by Mr. T. V. Wollaston.
2. 'Geodephaga Britannica;' by the Rev. J. F. Dawson.
3. 'Insecta Britannica;' the third volume of the series comprising the 'Micro-Lepidoptera;' by Mr. Stainton.
4. The 'Natural History of the Tineina;' published under the superintendence of a Committee, consisting of Mr. Douglas, Mr. Stainton and Mr. Wing. A very novel feature in this work is, that it will be printed in four languages, English, French, German, and Latin. There can be no doubt that this will be a great advantage, seeing how often scientific works printed in one language, and that modern, become, as it were, sealed books to the majority of the scientific world.

On the continent the following works appear to demand an especial notice:—

'Monographie des Guêpes solitaires ou de la Tribu des Euméniens;' par H. F. de Saussure.

'Lepidoptera Microptera quæ J. A. Wahlberg in Caffrorum terra collegit;' by P. C. Zeller: published at Stockholm in 1852. This work contains descriptions of upwards of a hundred species, and is remarkable as referring solely to the Micro-Lepidoptera of a country of which I may truly say we were previously quite uninformed.

Gerhard's so-called 'Monograph of the Lycænidæ' is also completed, containing coloured figures and names of almost every species, and forming a moderately-sized 4to. volume: when I state that of this volume 21 pages only are letter-press, the explanatory term of "so-called," will, I trust, be understood.

M. Fischer has published a 4to. volume with plates, intituled 'Orthoptera de Fribourg.'

In the United States a new and improved edition has been published of Dr. Harris's elaborate work on 'Insects injurious to Vegetation.' This is a work of great merit; and, although its utility is mainly confined to the district of the insects of which it more especially treats, yet it is well worthy the deep and thoughtful study of every entomologist, and particularly of such as make economy and economic relation of insects with man the especial objects of their research.

The 'Linnæa Entomologica,' 'Entomologische Zeitung,' and 'Annales de la Société Entomologique de France,' have all appeared as usual.

And now, Gentlemen, it only remains for me to thank you for your very indulgent attention. I am well aware how imperfect my brief address must appear when compared with the learned and detailed summaries prepared by my predecessors: but I trust entirely to your kindness in avoiding comparisons, and in accepting my humble attempt to express opinions, to which the Society is in no way pledged, and which I earnestly desire may only pass as those of an individual member.

February 6, 1854.—E. Newman, Esq., President, in the chair.

Donations.

The following donations were announced, and thanks ordered to be given to the donors:—'Bulletin de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique,' Tome xx. Parts 1 and 2: 'Mémoires Couronnés,' Tome v. Part 2, Tome vi. Part 1: 'Instructions pour l'Observation des Phénomènes Périodiques': 'Mémoires de l'Académie Royale des Sciences, des Lettres et des Beaux-Arts de Belgique': all presented by the Academy. The 'Zoologist' for February; by the Editor. 'Monographie des Guêpes Sociales,' par H. de Saussure, Cahiers 1, 2, and 3; presented by the Author. The 'Athenæum' for January; by the Editor. The

'Literary Gazette' for January; by the Editor. The 'Journal of the Society of Arts' for January; by the Society. A box of British Lepidoptera, by P. H. Vaughan, Esq.

Nomination of Vice-Presidents.

The President nominated as Vice-Presidents for the year W. W. Saunders, Esq., F. Smith, Esq., and H. T. Stainton, Esq.

Prize Essay for 1854.

It was announced that the Council, on behalf of the Society, renewed for this year the offer of a prize of £5 5*s.* for the best Essay on the Natural History of the Cocci injurious to British fruit-trees, especially of the "mussel-scale blight" of the apple, considering that the short notice given last year may not have given time for the preparation of such a paper. And the Council also now gave notice that they would award a similar prize for the best Essay on the Natural History of the Coccus which produces the lac-dye of commerce, which should be delivered to the Society on or before the 31st of December, 1855; and it was stated, as an encouragement, that Dr. Royle had kindly promised that the information at present possessed by the East India Company, or any other that the resources of that Company could procure from India on the subject, should be at the service of those who might be induced to take it up.

Election of Members.

The following gentlemen were balloted for and elected Members of the Society:— George Brownell, Esq., Shaw Street, Liverpool; John Maxwell Savage, Esq., 26, Gloucester Place, Portman Square; Francis P. Pascoe, Esq., F.L.S., Fern Lodge, Kensington; Jacob Birt, Esq., Sussex Gardens, Hyde Park: and J. R. S. Clifford, Esq., Pimlico, was elected a Subscriber.

Exhibitions.

Mr. E. L. Layard exhibited several large cases of Lepidoptera collected by him during a residence of several years in Ceylon; nearly all in fine condition, and including species of great beauty and rarity.

The President exhibited a perfect male and female, as well as the larva-case and a drawing of the larva of a Sackträger, found by Mr. Bates in the interior of Brazil; it was evidently a species of Saccophora, and he proposed to call the species Batesii: he was preparing a detailed account of this curious genus, to which he would again call the attention of the Society as soon as some illustrative drawings had been prepared.

Mr. Douglas exhibited a Phigalia pilosaria, taken at 11½ P.M., on the 21st of January, sitting on a gas-lamp, at Lee. This appearance, so very early in the season, was the more remarkable from the continued low temperature existing to within a few days previous. He remarked also, with reference to the hour of its capture, that he had always seen moths on the street-lamps to be more numerous after 10 o'clock at night. Since the late mild weather had set the grass growing, he had noticed young hybernated larvæ of Elachistæ mining in the newly formed leaves.

Mr. Stevens exhibited Argynnis Paphia, ♂, a variety in which the black spots on the upper surface of the wings, usually of a round form, were run together into oval patches; also Argynnis Euphrosyne, ♀, a variety with a black band across the centre of all the wings, giving it the appearance of a distinct species. Both specimens were captured by Mr. Johnson, near Ipswich. Mr. Stevens also exhibited specimens of Elater impressus, *Fab.*, a new British species, captured at Rannoch, in 1853, by Mr. Weaver and Mr. Foxcroft.

British Elateridæ.

Mr. Curtis read a paper entitled "Critical Remarks upon the British Elateridæ, with Descriptions of some of the Species."

New Work on the Genera of Coleoptera.

Mr. Waterhouse called the attention of the Meeting to a work about to be published in Paris, by subscription, entitled 'Genera des Coléoptères,' par M. Jacquelin du Val, with plates by M. Jules Migneaux. The whole work will be comprised in 86 parts, large 8vo., each of which will contain 3 plates of 5 coloured types, details of generic characters, and corresponding text, and the price 1½ franc.

Species of Cherrus and Polyphrades.

Mr. Waterhouse stated that during last autumn he visited Oxford for the purpose of examining a portion of the Rev. Mr. Hope's collection, and that after that visit he communicated some observations which he had made relating to certain species of Curculionidæ (which were described by Schönherr, from specimens in the collection in question) to M. Jekel; amongst other points he noticed the very great resemblance which there existed between the type-specimens of Polyphrades cinereus and Cherrus nanus, which he thought ought not to be separated generically, and which could scarcely be even separated as distinct species. In return, M. Jekel favoured Mr. Waterhouse with some observations upon the species of Cherrus and Polyphrades, which he regards as of sufficient interest to be laid before the Society.

The following is M. Jekel's communication:—

"Genera Cherrus and Polyphrades.—This is a very interesting case, which, after many troublesome efforts, I ascertained about two years ago, in studying the new species of Germar—Cherrus nitidilabris, of the 'Fauna Novæ Adelaidiæ.' I do not know whether I spoke to you on the subject last summer, but I had been puzzled as you are now. My decision was as follows:—

"1. Schönherr described Cherrus nanus in vol. i., doubting, in a note, as to its being a true Cherrus, and at that time he knew only this species as belonging to the Cherriform beetles.

"2. In vol. v., when reviewing his genus Cherrus, he no longer had by him the Cherrus nanus, and when he there established his new genus Polyphrades, he did not sufficiently recollect the characters of that species, which, as I have said, he originally doubted as being a true Cherrus. He then described a large species of Polyphrades under the name cinereus, a species very closely allied to Cherrus nanus, but which may be distinguished by its having the suture cariniform behind, a character wanting in Cherrus nanus and C. nitidilabris. I possess, however, two other undescribed species with the same character.

"These species might be divided into two sections, which I am certain are not founded upon sexual characters, since I possess both sexes of some of them.

"1. Elytrorum sutura postice elevato-carinata; including Ch. cinereus, *Schönherr*, and two new species.

"2. Elytrorum sutura plana—Ch. nanus, *Schö.*, Ch. nitidilabris, *Germ.*, Ch. paganus, *Schö.* They all differ somewhat in the structure of the rostrum and antennæ from P. laticollis, P. argentarius, &c., but they scarcely should constitute a distinct genus."—*J. W. D.*

SOCIETY OF BRITISH ENTOMOLOGISTS.

December 6, 1853.—Mr. H. HARDING, President, in the chair.

The President exhibited some specimens of Speranza conspicuaria, and observed that this insect was comparatively common at Darenth and Birch Woods some years back, but had now quite disappeared from those localities.

The President next presented a box of insects for the Cabinet from a friend.

The members present were then entertained by the exhibition of a number of entomological objects under the achromatic microscope.

January 3, 1854, *Anniversary Meeting.* — Mr. H. HARDING, President, in the chair.

The President exhibited the pupa and food of Depressaria rotundella, fed on Echium vulgare; likewise specimens of Depressaria Alstrœmeriana, fed on the same. Mr. Stainton says the food was not before known.

Mr. Dalman exhibited specimens of Ectinus aterrimus, taken near Deal.

The Secretary then read his Report for the past year.

The President then delivered an Address on the State and Prospects of the Society, and on Entomology generally; said he was very glad to hear from the Report, that the Society was free from debt, and that the number of insects in the Cabinet had increased principally by means of presents, and that although the Society had not increased very rapidly in members it had added to its number; and it gave him much pleasure to see it was in every respect in a thriving condition: he then proceeded to give a retrospect of the past year, entomologically considered; remarking that although 1853, taken as a whole, had been cold and wet, and although everything was very backward, so much so, that many of the early insects were two months behind the usual time, as was noticed in the monthly reports (published in the 'Zoologist'), and was more fully described by a writer in the same periodical, page 4129, who there remarks that Semiophora gothica, which ought to be out in March, he took in July: nevertheless, the year had been a good one for entomologists, thus verifying the adage, that a bad beginning sometimes makes a good ending. Although no new localities had been worked that he was aware of, many rare insects had turned up in Hampshire, and particularly in Scotland, and one or two new things in Lepidoptera. On the southern coast the President had himself taken Anerastia Farrella and Exæretia Allisella, an entirely new locality for both these Micro-Lepidoptera. Some rare Coleoptera had been taken in the same locality, among which he would particularly mention Helops pallidus and Ectinus aterrimus. In Hymenoptera, particularly among the Ichneumonidæ, the President observed that his friend Mr. Desvignes, informed him that he had made some valuable discoveries, and he announced that he intended to follow up these researches more fully during the approaching season. Again, in Micro-Lepidoptera much has been done, but much more remained to be done; he, for one, fully intended to be a labourer in the vineyard, and he hoped that all those who heard him would assist in the cause. On the whole, he believed that entomologists had reason to congratulate themselves on the produce of the year 1853.

In the report of the November meeting, at the end of the remarks about Elachista Cerussella, read the dark one or male is only to be obtained by breeding: Mr. Harding informs me the female is common in the fens.—*J. T. N.*

ZOOLOGICAL SOCIETY OF LONDON.

January 24, 1854.—Dr. Crisp made the following exhibitions.

Great Gray Shrike.

A gray shrike (*Lanius excubitor*), which was shot in the eastern part of Suffolk, in October last. Mr. Bartlett, on examining the bird soon after it was shot, thought it was the American species. On comparing its anatomy with that of the red-backed shrike (*L. collurio*), the only important difference was in the weight of the brain. Thus the brains of two red-backed shrikes examined, weighed 12 and 13 grains; the weight of their bodies being 1 oz. 160 grs., and 1 oz. 185 grs. The weight of the body of the gray shrike was 2 oz. 80 grains; of the brain 59 grs.; forming a somewhat remarkable contrast. The gizzard of the last-mentioned bird contained a dung-beetle and a grasshopper.

Peregrine Falcon.

A peregrine falcon (*Falco Peregrinus*), also shot in the eastern part of Suffolk, in December last. The bird was very muscular and fat. Its weight 2 lbs. 5 oz.; whilst the weight of another dissected, that had been kept in confinement, was only 1 lb. 7 oz. Of two goshawks (*F. palumbarius*), dissected last year, the first weighed 2 lbs. 4 oz., the second 2 lbs. 5 oz. The body of the common buzzard (*Buteo vulgaris*), 1 lb. 8 oz. The chief motive for the exhibition of this bird was to show the tarsal muscles, which although of large size, more especially the flexor of the hind toes, were small, when compared with those of the fruit-eating pigeons, particularly the nutmeg (*S. ænea*), exhibited at the Society in December last.

Specimens of Filariæ.

Two specimens of worms (*Filaria*), from the lungs and heart of the peregrine falcons mentioned above. The Filariæ in the cellular tissue at the root of the great vessels of the heart were five or six inches long, and the specimen was believed by the author to have been unique. A large number of Ascarides, two inches in length, from the stomach of the common buzzard (*B. vulgaris*), wild. In the stomach were also skeletons of two small birds, the bones being denuded of their flesh by the gastric juice. Dr. Crisp thought the fact worthy of notice, that the bones should be expelled from the mouth of the bird and the worms be retained.

Œsophagus and Stomach of the Heron.

The œsophagus and stomach of the common heron (*Ardea cinerea*), distended with air for the purpose of showing the large size of the former, the diameter of which (when distended) measured 2 inches. The stomach contained the skin, tail, and other bones of a large rat. The preparation afforded a beautiful example of the power of the gastric juice, which had by its chemical action alone removed the flesh from the bones. The bird in question was a very large specimen. It weighed 4 lbs. 1 oz., and measured from the tip of each wing 6 feet. The weight of two others dissected was 3 lbs. 13 oz., and 3 lbs. 8 oz.

The following communications from Dr. Edwards Crisp, illustrated by drawings and preparations, were read:—

Anatomy of the Great Bustard.

"On some points relating to the Anatomy of the Great Bustard (*Otis tarda*), more especially on the (so-called) Neck-pouch."

During the last eighteen months I have had an opportunity of examining three of these birds, two females about eighteen months old, and a male aged about two years and six months. The weight of the male bird was 12 lbs.; of the females 6 lbs., and 7 lbs. 12 oz. I select the two last birds dissected (male and female), for the purpose of elucidating such parts of the visceral anatomy as, I believe, have not been before described, in the same manner. I may premise that the male bird (in the Society's collection) died during the recent cold weather from a broken leg (December, 1853), and was excessively fat, more so than any gallinaceous bird I have before examined. The fat in the pelvis was hard, white, and solid, containing a good deal of stearine, and weighed 3 oz. 320 grs. The morbid appearances in the female were very remarkable, and as far as I know, unique. The abdomen was enormously distended with a hard tumor, which I found to be the gizzard immensely enlarged. On cutting into it, it was seen to be distended with tough grass, dry and in the form of a ball. The parietes of the gizzard were thin, and the muscular character of the organ nearly lost. In fact, it was a gizzard converted into a stomach, by stretching. The contrast between the gizzards of these two birds (before the Society) was very remarkable. The viscera weighed as follows:—

	Male.	*Female.*
Heart	2 oz. 21 grs.	1 oz. 208 grs.
Lungs	1 „ 240 „	420 „
Liver	4 „ 340 „	6 „ 400 „
Spleen	24 „	52 „
Pancreas	31 „	84 „
Kidney	380 „	400 „
Length of Alimentary Canal	7 feet 3 inches.	8 feet 7 inches.

The difference in the weight of the viscera may readily be accounted for by the mode of death.

In the measurement of the alimentary canal the appendices are included; in the male bird the two were 24 inches long; in the female 30 inches. The brain of the male weighed 151 grains. I will only allude to a few points connected with the anatomy of this bird: probably they have been before noticed, but I have not met with any account of them.

Skeleton.—The head broad: orbitar foramen large: the bones generally large and heavy (comparatively), as in most ground birds: cervical vertebræ 14; dorsal vertebræ 7: ribs 7: depth of sternum 2½ inches: length 7 inches; breadth 4 inches: upper part of chest wide.

Tongue serrated laterally: os hyoides 3½ inches long: opening of glottis large: trachea voluminous: length 10 inches; rings entire, three bony rings at the bifurcation of each bronchus. Œsophagus capacious: pro-ventricular glands much developed and of an oblong shape. Gizzard less muscular than in other gallinaceous birds; cuticular lining tough and corrugated. The structure of the gizzard shows that the bird is partly an insect-feeder.* Heart large and pointed; length from base to apex 3 inches 4 lines; thickness of parieties of the left ventricle 7 lines; of the right ventricle 1½ line; auricles covered with fat. Liver: the lobes very obtuse; no gall-bladder. Spleen of a rounded form, like that of most gallinaceous birds. Pancreas bilobed. Kidney very large; the lowest lobe the most voluminous.

The chief points of difference between this and the other gallinaceous birds, excepting the Struthionidæ, are the thinness of the gizzard, and the greater size of the eye, ear, and nostril. But my object in bringing the anatomy of this bird before the Society, is in reference to the faucial pouch (so-called), figured in Mr. Yarrell's 'British Birds,' 1843, and in Professor Owen's article on "Birds," 'Cyclopædia of Anatomy and Physiology.' I copy the supposed discovery of this pouch from Mr. Yarrell's 'British Birds,' 1843, vol. ii. p. 369:—"Dr. James Douglas, of the College of Physicians first discovered it. It is a pouch or bag to hold fresh water, which supplies the bird in dry places when distant from water: entrance between the under-side of the bill. I poured into this bag when the head was cut off nine pints of water."

In a communication made to this Society by Col. Sykes (Oct. 9, 1832, "Proceedings"), on the Otis nigriceps, he says, "the male bird is provided with the gular pouch common to the Otis tarda." Professor Owen told me this morning, that "he did not now believe in the existence of this pouch, that he had relied upon the statements of others, and that Mr. Yarrell also disbelieves in its presence."

On a careful dissection of the male bird, I find a thin membrane covering the whole length of the trachea; attached to the os hyoides above, to the œsophagus and cervical vertebræ behind, and to the clavicles and sternum below; its attachment to the trachea in front is very loose, and a probe can readily be passed between it and the trachea, and probably if air or water were introduced under it, a bag might easily be formed, but it has no connexion with the mouth or pharynx, nor can I conceive that it could be used for the purpose assigned to it, for if filled with water, it would materially interfere with the functions of the trachea and œsophagus. The presence of this membrane may perhaps account for the statement, that this male bird is provided with a bag to contain water during the breeding-season. I do not deny the existence of such a bag, but I think its presence, in any case, is very doubtful.

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* Mr. Frazer, who has been a long time in Africa, in reference to this remark, informed me, after the meeting, that the food of the Otis Hobara consists chiefly of grasshoppers.

Professor Owen, in his article on "Birds," above-mentioned, refers to analogous pouches in the pelican, rook, and swift, but I think these receptacles for food bear no resemblance to the supposed faucial pouch; and it must be remarked that these are not peculiar to the male bird. In my dissection of the females I did not examine the neck, but it will be interesting hereafter to ascertain whether the membrane I have described exists in the female bustards, and in other species of birds.*

I have also examined the preparation in the Museum of the College of Surgeons (772, Q.), alluded to by Mr. Yarrell, and prepared by Professor Owen in 1848, which clearly shows that there is no connexion with the pharynx and this supposed gular pouch. Mr. Yarrell, in his paper, speaks of a thin membrane over the windpipe.

On the Anatomy of the Viscera and other parts of the American Tapir, (Tapirus Americanus).

I have had an opportunity of dissecting three of these animals that have died at the gardens of the Society during the last eighteen months, and have taken sketches of the viscera and of other parts (before the Society), which appeared to me to offer points of special interest. The subjoined table gives in a short space the cause of death; the supposed weight; the length of the animals, and of the alimentary canal, as well as the weight of the viscera. The examinations were conducted by myself, and the organs weighed by steel-yards, accurately tested.

	Male, No. 1.	*Female*, No. 2.	*Male, young*, No. 3.
Age	5 years.	5 years.	about 3 years.
Weight	about 4 cwt.	about 3½ cwt.	about 140 lbs.
Weight of Viscera.			
Lungs	4 lbs.	6 lbs. 6 oz.	2 lbs. 4 oz.
Heart	2 ,, 12 oz.	3 ,, 6 ,,	0 ,, 13 ,,
Liver	4 ,,	6 ,, 4 ,,	3 ,, 15 ,,
Spleen	1 ,, 13 ,,	2 ,, 12 ,,	0 ,, 8 ,,
Kidney	0 ,, 13 ,,	0 ,, 8 ,,	0 ,, 7 ,,
Length of Alimentary Canal	62 feet.	72 feet.	46 feet.
		Length . 6 ft. 5 in. Gut...... 4 ft. 10 in.	Length 4 ft. 5 in.
	Died of perforation of stomach, from ulceration.	Brain-symptoms, from diseased kidney, probably.	Inflammation of mucous membrane of bowels.

Mr. Yarrell, in the 'Zoological Journal,' (1828, 1829, p. 210), has given an account of the dissection of a small American tapir, about twelve months old, that died at the Regent's Park Gardens. In this animal the small intestines were only 21 feet. Mr. Yarrell refers to Sir E. Home's account of the Sumatran tapir in the 'Philosophical Transactions,' 1821, and, on comparison, he infers that in the latter animal the stomach is large, the cœcum small, and the intestinal canal very long;

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* Since this paper was read, I have seen the very interesting communication of Mr. Yarrell upon this subject in the 'Transactions of the Linnean Society,' 1853: to this paper I refer the reader for much interesting information respecting this bird.

whilst in the American tapir the stomach is small, the intestines of moderate length, and the cœcum large; but I copy the subjoined from the paper in question:—

"The length of the tapir of Sumatra is 8 feet: whole length of its intestinal canal 89 feet 6 inches. Proportion as 11 to 1.

"Length of the American tapir 4 feet: whole length of its intestinal canal 18 feet. Proportion as 7 to 1."

It is scarcely necessary to add that the foregoing comparison does not hold good, and that the differences pointed out do not really exist. Mr. Yarrell laboured under the disadvantage of drawing his inferences from a very young animal, and of being misled to some extent by the paper of Sir E. Home.

I have selected the viscera of the female for the purpose of examination; of these I took especial notice. No important difference was observed in the three, except in those parts arising from peculiarities of sex.

Weight of the brain 7 oz. 384 grs. Cerebrum 6 oz. 354 grs. Cerebellum 1 oz. 30 grs. Corpore striata beautifully marbled with gray and white matter. The eye small, of a bluish colour, and 18 lines in diameter. The anterior part of the tongue thinly studded with small, round, transparent papillæ; the back part velvety. Trachea large; rings wide; a membranous junction at the posterior part one inch in length. Lungs, the right trilobed, the left divided into two lobes. Heart large, and the parietes of the left ventricle very thick. Length from base to apex 8½ inches. Liver five-lobed, with five appendages. No gall-bladder. Stomach 19 inches in length, and undivided; no rugæ when distended. Œsophagus: lining membrane in longitudinal folds. The lining membrane of the duodenum and jejunum of a velvety appearance. The ileum contained numerous patches of Peyer's glands; these were of an oblong shape: all of them single, with an intervening space of five or six inches. The cœcum large, and its lining membrane rugose. The kidney, in shape, resembled that of the pig. The bladder large, when half full it measured 9 inches, and would hold about three pints of fluid. The spleen long and lax, measuring one yard and two inches; the vein contained nearly a hundred openings, and near its mouth were *two valves for the purpose of preventing the regurgitation of the blood.* These valves were present in all, and I believe the discovery of these valves, in a certain class of animals only, will serve much hereafter to elucidate the function of this organ. Organs of generation: the vagina 10 inches in length, with large transverse rugæ in the mucous membrane. The os uteri small, with transverse opening. The uterus consists of a body and two cornua; the body 3 inches, and each cornu 13 inches. The ovaries large.

I must reserve other parts of the anatomy of this animal for a future paper, when I purpose making a comparison between the organs of the tapir and those of animals of the same class. I will, however, in conclusion, allude to two points of especial interest, viz., the skin and the levator muscles of the snout.

The skin in many parts is seven or eight lines in thickness. The crest on the neck is formed of dense cellular tissue more than an inch in depth, and nearly equals in hardness the skin of the rhinoceros. Under the microscope, I found it to consist chiefly of fibrous tissue, with many fat globules. The levator muscles of the snout, by which the animal is enabled to lift his nose, are very remarkable; they consist of two muscles, which arise by a broad and rather fleshy expansion from the nasal, superior maxillary and lachrymal bones; they then form cylindrical, fleshy bodies, ending in long, narrow tendons, which are inserted into the skin of the nose, about half an inch from its extremity. The animal is said to take its food chiefly at night, and it is probable that the great mobility of its snout and nostril, enables it to obtain its food with greater facility.

GREENWICH NATURAL-HISTORY SOCIETY.

November 26, 1853.—GEORGE BUSK, Esq., F.R.S., President, in the chair.

Quadrumana of the New and Old World.

A paper was read intituled, "A Comparison between the Quadrumana of the New and Old World, with especial reference to their Nasal Peculiarities," by Cuthbert Collingwood, M.A., F.L.S., Hon. Soc.

The author commenced with a brief review of the classification and geographical distribution of the Quadrumana, pointing out and illustrating the chief characteristic distinctions between the Old and New World Families; namely: — 1. Their comparative size. 2. The presence or absence of cheek-pouches. 3. The development of the tail. 4. Their dental peculiarities. 5. The degree of opposability of the thumb. He also laid particular stress on the great distinction founded by Geoffroy St. Hilaire on the width of the nasal septum and the aspect of the nostrils: and then proceeded to examine each of these nasal characters separately, and to test several species of Quadrumana by the definitions which St. Hilaire has himself given of the terms Catarrhini and Platyrrhini, in order to show that they are of by no means universal application; but that, on the contrary, the description of a Catarrhine monkey would apply perfectly to some of the Platyrrhine group, and that of the Platyrrhini to some Catarrhini. The most marked examples adduced as exceptional in support of this assertion were some of the Colobi, especially Colobus Guereza among the Old World, and the whole genus Brachyteles (*Eriodes*) amongst the New World Quadrumana. In all these, it was shown that both the characters involved in the definitions above referred to, were misapplied; and that, in several other instances, one or other of these characters was reversed.

The author then called attention to a character which, in his opinion, would unite all these exceptional cases, and define the boundaries of the Catarrhine and Platyrrhine groups much more perfectly, and would, at the same time, have the advantage of even greater simplicity, since it would involve only one element. This character, stated in the fewest words, is as follows: —

Simiæ Catarrhini. Lowermost angles of the nostrils pointing *outwards.*

Simiæ Platyrrhini. Lowermost angles of the nostrils pointing *inwards.*

And it was found that this character applied as perfectly to the cases before referred to, in which both St. Hilaire's characters were reversed, as it it does to the mass of the species; because it depends not upon the width of the nasal septum, but upon its form, which is that of a wedge in the Catarrhini, but of an hour-glass-shape in the Platyrrhini.

This paper was illustrated by osteological preparations from the Museum af Guy's Hospital, and by diagrams.

NOTICES OF NEW BOOKS.

'*Transactions of the Entomological Society of London.*' New Series. Vol. II., Part 7. 8vo., 48 pages of letter-press, 4 plates. *Price* 3*s.* 6*d.* London: Longman. 1854.

THE contents of this part are as under: —

'Contributions to the Natural History of British Micro-Lepidoptera.' By J. W. Douglas, Esq. (Concluded).

'Monograph of the Genus Cryptocerus, belonging to the Group Cryptoceridæ, Family Myrmicidæ, Division Hymenoptera Heterogyna.' By F. Smith, Esq.

'A Revision of the Synonymy of the British Species of the Coleopterous Genera Hydrochus and Ochthebius.' By G. R. Waterhouse, Esq., F.L.S.

'Descriptions of some new Species of Coleoptera from China and Ceylon.' By J. O. Westwood, Esq., F.L.S., &c.

Of Mr. Douglas's paper we have already spoken in terms of unmingled commendation. Mr. Smith's Monograph of Cryptocerus is a paper of very high character; and the careful manner in which the species are described, the synonymes worked out, and the specimens figured, do the author great credit. The number of species previously known was twenty; to these Mr. Smith has added fifteen new ones, making a total of thirty-five, twenty-four of which are figured.

'*The Annals and Magazine of Natural History.*' No. 72, dated December, 1853; *price* 5*s.*: and No. 73, dated January, 1854; *price* 2*s.* 6*d.* London: Taylor & Francis, Red Lion Court, Fleet Street.

The papers in No. 72 are intituled: —

'On the British Tritons.' By John Higginbottom, F.R.S.

'Notes on some new or little-known Marine Animals.' By P. H. Gosse, A.L.S.

'Descriptions of some undescribed Species of Reptiles collected by Dr. Joseph Hooker in the Khassia Mountains, East Bengal and Sikkim Himalaya.' By J. E. Gray, Ph.D., F.R.S., V.P.Z.S., P.B.S., &c.

'On the Mechanism of Aquatic Respiration, and on the Structure of the Organs of Breathing in Invertebrate Animals.' By Thomas Williams, M.D. Lond.

'On Blood Rain, (*Palmella prodigiosa*, Mont.)' By H. O. Stephens, Esq.

'Descriptions of two new Genera (Pfeifferia and Janella) of Land Mollusca.' By J. E. Gray, Ph.D., F.R.S., V.P.Z.S.

'Notes on the Habits of Bivalve Shell Fish.' By S. P. Woodward.

'Centuries of North American Fungi.' By the Rev. M. J. Berkeley, M.A., F.L.S., and the Rev. M. A. Curtis, D.D.

'Note on the Transverse Processes of the Two-toothed Dolphin, (*Hyperoodon bidens*). By Professor Owen, F.R.S., &c.

'Remarks on Libellula Brodiei, *Buckman*, a Fossil Insect from the Upper Lias of Dumbleton, Gloucestershire.' By Professor Buckman, F.G.S., F.L.S.

'On Gallionella ferruginea, *Ehr.*' By J. W. Griffith, M.D., F.L.S.

Bibliographical Notices: — 'The Botany of the Eastern Borders, with the Popular Names and Uses of the Plants.' By G. Johnstone, M.D. 'The Handbook of British Ferns.' By T. Moore, F.L.S., &c. 'Beitrage zur Mycologie.' Von G. Fresenius, M.D. 'A Monograph of the Subclass Cirripedia.' By Charles Darwin, F.R.S., F.G.S.

Proceedings of Societies: — Zoological—Linnean.

Miscellaneous: — On the Mode of Reproduction and Development in the various Groups of Zoophytes and Mollusca; by M. Gegenbaur: extracted from the 'Comptes Rendus' for September 26, 1853, p. 493. On the Teeth of Testacellus and Glandina; by J. E. Gray, Ph.D., &c. On the Structure of the Retina in Man; by Professors Kolliker and H. Müller: extracted from the 'Comptes Rendus' for Sept. 26, 1853, p. 488. Discovery in the Human Body of a Substance giving the same Chemical Reactions as Cellulose; by M. Virchow: extracted from the 'Comptes Rendus,' *l. c.* 492.

Mr. Higginbottom's paper on the British Tritons is one which will be studied with pleasure and profit by every herpetologist. The reduction of our British species to three, will meet with general acceptation: the renaming of these three species will, we think and hope, be as generally rejected. The new names proposed by Mr. Higginbottom, with their equivalents in Bell's 'Reptiles,' and in authors which have the claim of priority, may be expressed as under: —

Mr. Higginbottom's proposed Names.	*Names employed in the 2nd edition of Bell's 'Reptiles.'*	*Names which have the claim of priority.*
Triton asper, *H.*	= Triton cristatus, Triton Bibronii,	= [Triton] palustris, *L.*
Triton lævis, *H.*	= Lissotriton punctatus	= [Triton] aquaticus, *L.*
Triton minor, *H.*	= Lissotriton palmipes	= [Triton] palmipes, *Dd.*

The very discussion of a name on the ground that it might be exchanged for a prettier, a more descriptive, or a more classical name, implies the possession of a choice which is vested in no man. We are perfectly open to conviction on this, and, we trust, on every other subject; but the law of priority appears to us so binding and so beneficial in its working, that no argument we have hitherto heard induces in us the slightest disposition to question its propriety.

At the present moment, we hold that no received name can be rejected, even in favour of a better. But were we to renounce this *primâ facie* objection to new names, and confine ourselves simply to the meaning of the new names now under consideration, we think it would be utterly impossible to select three Latin words less distinctive or descriptive of the three species. The word "asper" conveys to any one conversant with the Latin tongue the idea of a property which none of our newts possess; the word "lævis" does not in any way distinguish the species so called from the next species, "minor," and several others which are equally "smooth;" and the name "minor" simply expresses comparative smallness, without suggesting the object with which the animal so called is to be compared. To ascend from names to the objects themselves, we may state that Mr. Higginbottom has drawn from actual observation, eight conclusions, which we unhesitatingly accept as highly probable and extremely valuable, even while we are prepared carefully and candidly to weigh all counter evidence. These conclusions are the following: —

"1. That there are only two species of Triton in the midland counties of England.

"2. That the tadpole of the Triton remains in the water until the branchiæ are absorbed, and the legs become sufficiently strong to enable it to leave that element, and does not usually return to it again until the expiration of the third year.

"3. That during three years it is a land animal, in a state of activity in the summer, and of hibernation during the winter.

"4. That the Triton is three years before it propagates its species, and four years in arriving at its full growth.

"5. That it revisits the water in the spring for the purpose of reproduction, and leaves it early in autumn.

"6. That fecundation is accomplished through the medium of water, and not by actual contact.

"7. That a very dry or a very wet situation are both fatal to the Triton when in a state of hibernation.

"8. That the habits and changes of the new Triton are in accordance with the other species."—P. 383.

The third of these propositions, namely, that the Triton, during his land life, is in a state of activity in the summer and of torpidity in the winter, must be regarded as rather more comparative than positive: if you turn up a Triton from under a stone, or extract him from some crevice between bricks in your cellar, you find him lethargic in every month of the year. Here is one on this sheet of paper; he is sprawling on his back: now he has regained his natural position; not agile indeed, yet not torpid: and the weather is cold; the ponds are frozen; Fahrenheit is at 26°: in summer he would be more lively, perhaps, but even then rather a slow reptile.

Note on the Extraordinary Torpidity of a Bat. By the Rev. Alfred Charles Smith, M.A.

While effecting some repairs in the pavement of the aisle of my church a short time since, the masons found it necessary to remove some bricks from the solid wall of an adjacent vault, in order the better to adjust an iron bar intended to support the superincumbent flag-stone. It seems that one or two bricks being removed, and several large and handsome coffins being exposed to view, curiosity tempted one of the workmen to reach his hand in with a lighted candle, in order to see the names and dates on the coffins; the result of which investigation showed that the last coffin was placed there in 1748. During this search I entered the church, just in time to witness the extreme surprise, and the no little consternation of the man, whose hand had suddenly come in contact with a bat, suspended from the roof of the vault. The bat was soon brought to light, and, in its half-torpid state, placed in my hand. We then proceeded to make a very minute examination of this vault with a lighted candle, in order to discover, if possible, by what means the bat could have penetrated to its resting-place: but, although our search was very careful and long-continued, we failed to discover the smallest crack or crevice in which a pin could be thrust. The roof was an arch of brick, surmounted by flag-stones; the sides were solid walls of masonry, bearing no appearance internally of decay; and the position of the vault was very near the centre of the church: so that I was much puzzled to account for the occurrence of the bat in a place apparently hermetically sealed for above a hundred years: and knew not how to combat the opinion of the workmen, that it must have been entombed there alive since the year 1748.

I now proceeded to institute inquiries regarding the vault in which the bat was found. The marble monument above, recorded the names of an old Wiltshire family long since extinct in these parts, and the dates of the three coffins below, corroborating the statement of the brass plate, that the individual last buried died A. D. 1748. Several old men in the parish remembered an adjacent vault being opened, when they were boys, nearly sixty years since; but all positively denied that the vault in question had ever been opened in their lives: and one, a very old man, formerly clerk, and whose then residence abutted on the church-yard, was very emphatic on this point. So that I am constrained to believe that the vault has remained untouched since it received its last occupant a hundred and six years ago: and I am the more convinced of this from the excessive freshness of the last coffin, the brass plate and nails of which were as bright, and its whole appearance as new, as if it had been placed there but yesterday, which would not have been the case had the external air been admitted at any time since the vault was closed.

During the time of the examination of the vault, the bat was held in my hand, and above an hour must have elapsed since its capture before I was enabled to take it to the Rectory, and place it under an inverted glass: by this time the warmth of my hand had considerably revived it, and it wandered round its prison, snuffing about with its curious nose, and standing up, and trying to hook itself on to the smooth glass, which baffled all its attempts. As it obstinately refused to eat small pieces of chopped meat, with which I tempted it to break its fast, which may have continued a hundred and six years, and after which I should have imagined it to be ravenous; and as it lay on its side, apparently in a dying state, humanity urged me to give it a chance of life, by restoring it to liberty, and I accordingly carried it to the garden, where I placed it upon the turf, and watched its movements. At first it clung to the blades of grass, and shivered a good deal; presently it fluttered along the ground; soon it rose upon wing, though in an awkward manner, and although it sank several times, as if about to fall to the ground, and as if it had not found the use of its wings (which might have been a little stiff for want of exercise, if they had been closed above a hundred years), it passed behind a clump of trees, and I saw it no more: and then I began to regret, when too late, that I had not made more efforts to keep it alive and watch its recovery. I know little of the different species of bats, but from its diminutive size, and extremely long ears, should imagine it to be the Vespertilio auritus of Gilbert White.

Now, if the hypothesis be deemed absurd that the bat had been immured in the vault since 1748, how then are we to account for its presence there? For although I am aware that a bat, and especially one of the smallest species, would creep through a very small chink or crevice, yet the evidence of my own senses, after a very close examination, convinces me that not even the smallest crack existed between the bricks of the vault: and I think the evidence no less conclusive that the vault has remained untouched for a great number of years. Again, notwithstanding the disbelief of some, it is very generally acknowledged that toads do occasionally exist in blocks of stone and in timber; and the material in which they are inclosed, having gradually formed around them, they must necessarily have been entombed, in some well-authenticated cases, for a very long period of time. Why then, I ask, should we deny that to be possible with the bat, which we so readily concede to be an occurrence by no means unusual with the toad? I own, that taking all these things into account, and finding no other possible solution for the mystery, I came to the conclusion, after mature deliberation, that the bat had been entombed in the vault since it last was opened in the year 1748. That impression has increased upon longer reflection, and has been further strengthened almost into certainty, from the perusal of a very interesting and very similar case, recorded by the Rev. P. G. Bartlett in an early volume of the 'Zoologist,' (Zool. 613). That gentleman states, that on opening a vault which had been closed for twenty-one years, a bat was discovered in a torpid state; that he himself made a very careful search about the vault, and was unable to discover any crack through which the smallest bat could have crept; that the vault was surrounded with brick-work; the entrance was bricked up, and over the steps was placed a close-fitting slab; and that he could come to no other conclusion than that the bat had been inclosed there for twenty-one years. I confess that I quite agree in opinion with Mr. Bartlett, and believe that the bat discovered in the vault in Bishopsbourne church, crept in on the occasion of its last opening; and so, in like manner with the one found in my own church: for although there is unquestionably a vast difference between twenty-one and a hundred and six years, yet if we can establish the fact of a bat remaining torpid for the shorter period, I find no difficulty in understanding that a sleep which could endure so long as that did, might be protracted to a far longer period. It is most probable that many will differ from me in opinion, and perhaps some will ridicule the idea: if they can discover any other probable or even possible means of accounting for the presence of the bat in the vault, exclusive of a crack or chink in it, or of its having been opened within the memory of living man, both of which views I firmly oppose, I shall feel greatly obliged by their stating their opinions in the 'Zoologist:' meanwhile I hold to my belief, that the bat had been there for not less than *one hundred and six years!*

Alfred Charles Smith.

Yatesbury Rectory, Calne,
February 18, 1854.

Note on the habits of Lymnæa stagnalis.—This fresh-water mollusk is long-lived in confinement. I have had some in glass jars since the early part of last summer. To-day I had a good opportunity of observing their mode of respiration. As one of them lay floating on the surface of the water, upheld by the air in its pulmonary sac, and by its inverted hollowed boat-like foot, I dropped a morsel of table salt on the centre of the latter. Instantly the animal retracted, falling heavily to the bottom, giving out while doing so, and for some seconds after, a stream of air from its breathing orifice under the mantle on the edge of the last whorl of the shell. It lay at the bottom for a few minutes in a kind of convulsion, projecting its one tooth to an unusual extent. It then became an interesting thing to notice how anxious it appeared to reach the surface for more air, how slowly it crept up the side of the glass, and how many times it fell down again, in consequence of its greater specific gravity than when under its usual conditions. At length it attained the top of the water. Here, instead of conforming to its usual habit of throwing itself, freely detached, swimming foot upward, as at first described, it crept further up the glass, half-an-inch above the water-line, in fact, until it had exposed its respiratory hole to the air. Then it took in a supply of the elastic fluid, the edge of the mantle opening with a slight, but distinct sound while in the act, and resumed its ordinary functions, remaining detached at the surface, as before. The evident reason for thus departing from its usual course, was, that its instinct led it to be aware that its weight was increased by the previous expulsion of air, and that it had lost its flotive powers. I repeated the experiment in the course of an hour, but not with quite the same result as before, for now the animal was so much weakened by its previous treatment, that I had to expose it to the atmosphere to save its life. It is now (February 4th) quite healthy and active. These observations give me much encouragement to proceed in minute and constant examinations, even when the subjects of them are the commonest inhabitants of our ditches.—*William Alford Lloyd; St. John's Square, Clerkenwell, London, February* 4, 1854.

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TO CONTRIBUTORS AND SUBSCRIBERS.

In addition to the Contributions acknowledged on the Wrapper of the Fe Number, many others have been received, but all are unavoidably postpone April.

'INSECTA BRITANNICA.'

THE UNDERSIGNED has ceased to be a Member o 'Insecta Britannica' Committee.

H. T. STAIN

Mountsfield, Lewisham,
February 15th, 1854.

TO ENTOMOLOGISTS.

MR. FOXCROFT begs to return his sincere thanks to the Tru of the British Museum, the Nobility, Gentry, and Clergymen, and the bers of the Entomological Societies, for the patronage he has received for a nur years; and takes the liberty of informing them and others, that he intends col Insects during the whole summer of the present year (1854), in the best locality in Scotland, which is round the Black Forest, Rannoch, Perthshire; commenc the 6th of April, and collecting for six months.

Mr. F., to enable him to carry out this plan, wishes to raise a sufficient Subscriptions of One Guinea; each Subscriber to be entitled to one specimen o species collected during the season, which will be equally shared in November, return, by himself. Those Subscribers who are Coleoptera-collectors, will have choice and rare Beetles divided amongst them in the boxes; and those who a lectors of Lepidoptera, will have all the rare and best specimens of Moths and flies divided among them. The specimens will be sent to the residences of th scribers; and the boxes containing them are to be returned or paid for.

Mr. F. hopes, by stopping in one locality in Scotland, to take such choice I or some new specimens that may be rare, to afford an excellent opportunity to men to obtain what may be wanting for their Cabinets; also for Proprietors o seums, and collectors of British Insects.

Persons wishing to become Subscribers, are requested to send their Subscri by Post-office Order, or otherwise, by the end of March at the latest, to Mr. Foxcroft, 3, Union Yard, 191, Oxford Street, London. Post-office Order made payable at 210, Oxford Street.

No person will be allowed to subscribe after the 6th of April; and no one considered a Subscriber until he has paid his Guinea.

A variety of British Insects always on sale. All kinds of Insect-boxes and nets for Insects. Nets and Breeding-cages of all kinds, and Cabinets for Sh Fossils made to order.

Mr. F. has just bred a quantity of Boletophagus crenatus, which are to alive, at 2s. each.

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